WHAT IS CLAIMED IS:

1. An electronic camera comprising:

a photoreceptor device that receives light from a subject and outputs signals corresponding to an image of the subject;

a setting device that sets an exposure at a time of photographing the subject; and

a calculation device that calculates an exposure to be set by the setting device, wherein a first output of the photoreceptor device is determined when a first exposure amount is set by the setting device and the subject is photographed, a second output of the photoreceptor device is determined when a second exposure amount is set by the setting device and the subject is photographed, the calculation device compares the first output and the second output and the one closest to an optimum exposure amount is selected as a selected exposure amount, the optimum exposure amount is determined based on the output of the photoreceptor device, wherein the selected exposure amount is changed by a prescribed value that is smaller than a difference between the first exposure amount and the second exposure amount.

2. The electronic camera of claim 1, wherein a third output of the photoreceptor device is determined when a third exposure amount is set by the setting device and the subject is photographed, the calculation device compares the first output, the second output and the third output and the exposure amount closest to the optimum exposure amount is selected as the selected exposure amount, wherein the selected exposure amount is incrementally changed by a prescribed value that is smaller than the difference between the first exposure amount and the second exposure amount and is smaller than the difference between the second exposure amount and the third exposure amount.

3.   The electronic camera of claim 2, wherein a ratio of light of the first exposure amount, the second exposure amount and the third exposure amount is 1:4:16.

4.   The electronic camera of claim 2, wherein the first exposure amount, the second exposure amount and the third exposure amount correspond to different shutter speeds.

5.   The electronic camera of claim 1, wherein signals corresponding to the first output and the second output are stored in a memory device.

6.   The electronic camera of claim 1, wherein the electronic camera continues to change the selected exposure amount until an output of the photoreceptor device corresponding to the selected exposure amount is within a predetermined range of the optimum exposure amount.

7.   An electronic camera comprising:

photoreceptor means for receiving light from a subject and for outputting signals corresponding to an image of the subject;

setting means for setting an exposure at a time of photographing the subject; and

calculation means for calculating an exposure to be set by the setting means, wherein a first output of the photoreceptor means is determined when a first exposure amount is set by the setting means and the subject is photographed, a second output of the photoreceptor means is determined when a second exposure amount is set by the setting means and the subject is photographed, the calculation means compares the first output and the second output and the one closest to an optimum exposure amount is selected as a selected exposure amount, wherein the selected exposure amount is changed by a prescribed value that is smaller than a difference between the first exposure amount and the second exposure amount.

8. The electronic camera of claim 7, wherein a third output of the photoreceptor means is determined when a third exposure amount is set by the setting means and the subject is photographed, the calculation means compares the first output, the second output and the third output and the exposure amount closest to the optimum exposure amount is selected as the selected exposure amount, the optimum exposure amount is determined based on the output of the photoreceptor means, wherein the selected exposure amount is incrementally changed by a prescribed value that is smaller than the difference between the first exposure amount and the second exposure amount and is smaller than the difference between the second exposure amount and the third exposure amount.

9. The electronic camera of claim 8, wherein the first exposure amount, the second exposure amount and the third exposure amount correspond to different shutter speeds.

10. The electronic camera of claim 7, wherein signals corresponding to the first output and the second output are stored in a memory device.

11. The electronic camera of claim 7, wherein the electronic camera continues to change the selected exposure amount until an output of the photoreceptor means corresponding to the selected exposure amount is within a predetermined range of the optimum exposure amount.

12. A method of calculating an exposure amount of an electronic camera, the method comprising the steps of:

performing an exposure operation at a first exposure amount to obtain a first output;

performing an exposure operation at a second exposure amount to obtain a second output;

calculating a first signal level based on the first output;

calculating a second signal level based on the second output;

comparing the first signal level with the second signal level and selecting the signal level closest to an optimum exposure amount as a selected exposure amount; and

changing the selected exposure amount by a prescribed amount smaller than a difference between the first exposure amount and the second exposure amount.

13. The method of claim 12, further comprising the steps of:

performing an exposure operation at the changed selected exposure amount to obtain a third output; and

further changing the previously selected exposure amount until the third output is within a predetermined range of the optimum exposure amount.

14. The method of claim 12, further comprising the steps of:

prior to the comparing step, performing an exposure operation at a third exposure amount to obtain a third output; and

calculating a third signal level based on the third output, wherein the comparing step compares the first signal level, the second signal level and the third signal level to select the signal level closest to the optimum exposure amount as the selected exposure amount.

15. The method of claim 14, wherein the prescribed amount is smaller than a difference between the first exposure amount and the second exposure amount and is smaller than a difference between the second exposure amount and the third exposure amount.

16. The method of claim 14, wherein the first exposure amount, the second exposure amount and the third exposure amount are different shutter speeds.

17. The method of claim 12, further comprising the step of storing the first output and the second output prior to the comparing step.